

RAPIDWRITER

Screen Features

VIC-20 screen shows 3 full lines of text plus line number, and memory still available.
CONTROL and OPTIONS MENUS - display the full selection of control keys for easy reference.
Shows 7 full lines of text on the VIC-64, and 15 lines on VIC-20 with an 80 column board.

Editing Features

Scrolling up and down, plus "goto line" to instantly position a line for editing.
Uses cursor keys to position the cursor to insert, delete, correct spelling, and glue lines.
Insert and Delete characters, words, phrases, or whole lines. . . even blocks of lines.
Line Gluing, and single key reformatting speed your editing chores.
Select line length, set up to ten tab stops, and even create your own data entry overlays.
Holds a full page of text in VIC-20 w/8K expander, 2 more pages for each 8K, 10 pages in the VIC-64.
Write, store, recall, move, edit, and print text in any order, at any time, in any quantity.
Automatic word wraparound, and line-length cut-off, automatic line feed, at typing speeds, to 80 wpm.

Printing Features

Versions available for the VIC-1515 printer, and your choice of serial or parallel interfacing.
Automatic "top of form" function formats and numbers pages. Automatically centers headings.
User sets margins, type style and size, and page length. Lets you print labels and novels with equal ease.
Supports underlining, sub and superscripts, and proportional spacing for printers so equipped.

Tape & Disk Features

Standard CBM file format, makes it easy to move data between "Rapidwriter" and other programs.
"Rapidwriter" provides on-screen prompts and advisories for error free tape and disk handling.
Uses fast forward under program control to eliminate the need to use the tape footage counter.
Disk version uses named files for quick access and overwrite protection.

And Much More

Written in BASIC, "Rapidwriter" is a highly structured program, easy to modify for special purposes.
Use "Rapidwriter" as a data entry module with other programs, and to format print-out for other programs.
Mix calculations with text - programmable calculator function built-in.
Complete reference manual, and easy to follow tutorial speed your mastery of the program.
Ongoing support - newsletter, and development of new add-on programs, home accounting package etc.

RAPIDWRITER

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RAPIDWRITER

**The Finest Word Processor You
Can Buy For The
VIC-20 & VIC-64**



From mailing labels to manuscripts, "Rapidwriter" does it all.
Full featured word processing for the VIC series of home computers is now available.
By combining the features of line by line and screen editing, "Rapidwriter" gives you complete flexibility to write, save, recall, edit, format, and print any kind of text.
There are no limits to document length, or the variety of ways that texts may be mixed and recombined to produce labels, letters, reports, newsletters, scripts, or books. In fact anything that can be produced on a typewriter can be produced with your VIC and "Rapidwriter" faster, and more easily. Absolutely ends tiresome retyping to make corrections as you quickly and easily master the complete editing features that "Rapidwriter" puts at your fingertips.

Rapidwriter

The Finest Word Processor You Can Buy For The

VIC-20 & CBM-64

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Rapidwriter

TUTORIAL

A Step by Step Instructional Aid

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INTRODUCTION

Rapidwriter

The Finest Word Processor You Can Buy For Your Vic!

Welcome to *Rapidwriter*. We are confident you will find it both easy to use and powerful. You can keep menus, financial data, mailing lists, household or business inventories and records on tape, as well as prepare and print letters, reports: anything that can be done with a typewriter and more. Serious writers will find *Rapidwriter* to be a valuable aid to writing, re-writing, editing and rearranging text.

Anything you type can be saved on a cassette and brought back to the screen at any time. This is useful, even if you do not have a printer. If you have a printer, you can get "hard copy" and save your text on a cassette at the same time. The choice is yours.

Rapidwriter is very flexible.

This TUTORIAL is intended to be a step-by-step aid. Basic procedures are covered in detail. The more advanced procedures are covered in the Manual.

Every effort has been made to arrange the TUTORIAL in a logical order so that you can go from page to page as you progress. Please note: it's a good idea to browse the whole thing before plunging ahead.

We welcome your comments and questions. Please fill out and return to us the card that was enclosed in the program pack. The card assures that you will be placed on our mailing list and will receive updated information and news about new applications for *Rapidwriter*.

SUGGESTED FIRST STEPS

Review carefully the CAUTIONS: DO and DON'T page.

Review the BASIC POINTERS page.

Review briefly the SCREEN DISPLAYS page.

Proceed to the PRELIMINARIES page to load and run *Rapidwriter*.

CAUTIONS: DO & DON'T

DO THE FOLLOWING!

- Do follow good practices in the handling, rewinding and storing of program and text cassettes.
- Do look into the MANUAL for explanations of procedures not covered in this TUTORIAL.
- Do follow exactly the instructions that appear on the screen.
- Do turn "OFF" OPTIONS MENU items when done using them.
If files are not closed, text in buffers will be lost.
- Do make sure to leave double pairs of quotation marks that appear on the screen, as pairs, or else erase both pairs together. The printer will print the correct number of quotation marks. The sample text used in this tutorial does not contain any quotes.

The program will tolerate errors without much problem, but you will save time and trouble if you learn to run the program "by the book".
Saving time is what *Rapidwriter* is all about.

DON'T DO THE FOLLOWING!

- Don't try to turn "ON" READ FROM TAPE when PRINT ON TAPE is "ON".
- Don't try to turn "ON" PRINT ON TAPE when READ FROM TAPE is "ON".
- Don't ever have a single pair of quotation marks on a line of text.
It's OK to see this: "" on the screen on a text line,
but never this: " .

BASIC POINTERS

TYPING:

Use shift key for upper and lower case as with a typewriter.
Cursor does not blink when typing or editing.

CONVENTIONS:

The word "Press" is generally used to mean pressing a single key. For example: Press: RETURN

The word "Type" is used to mean pressing two or more keys, one after the other. For example: Type: LOAD

APPEARANCE OF TEXT:

You will quickly get accustomed to visualizing the two to four line blocks of text as they appear on your screen as a single line when ultimately printed on paper.

Built-in (default) values automatically give the following:

- 66 characters per printed line.
- 5 space left side margin.
- A tab position at another 5 spaces.
- Single space printing.
- 54 lines per printed page.
- Automatic page feed after 54 lines.
- Standard print: 10 characters per inch.
- Page numbers not printed.
- Line numbers not printed.

Any of the above can be changed to get: double triple or more space printing, up to 10 tab stops, choice of margins and number of characters per line, printed line numbers, page numbers printed at top or bottom of the page, and choice of different print styles. The procedures for entering choices are described elsewhere.

CONTROL KEYS:

The control keys are the VIC's "function keys". These are the brown keys, located on the right side of the keyboard marked f1 through f8. There are four keys:

To use f1, f3, f5 or f7: press each key directly.

To use f2, f4, f6 or f8: hold the SHIFT key and press the "function" key at the same time.

RECOVERY FROM ERRORS:

Carefully worded directions and menus appear on the screen to guide you. There could be a slip of the finger. Most errors have no effect, you just press the correct key and go on.

If a situation should arise in which something clearly has gone wrong, refer to the MANUAL. The section on Crashes and Recoveries includes procedures to cover any contingency.

PRELIMINARIES

Turn on the Computer, TV or Monitor with sound volume turned up.

Place the *Rapidwriter* cassette into the Tape Player and rewind completely. Press **STOP** on the Player.

Type: LOAD. Press: **RETURN** and follow the instructions displayed on the screen.

Display will show, in turn:

```
PRESS PLAY ON TAPE
OK
SEARCHING
FOUND RAPIDWRITER
LOADING
READY
*
```

Press: **PLAY** on Tape Player

It takes 2-3 minutes to load.
Loading is complete when the
flashing cursor appears.

(Before continuing, rewind and remove the program cassette and store it away carefully.)

Type: RUN. Press: **RETURN**

Display will show:

```
RAPIDWRITER
(c) H.D. Mfg. Inc. 1982
All Rights Reserved
NOW PRESS A KEY
```

Press: any key. It's OK to use
the Space Bar as a key.

Display will show:



See the Screen Displays page of
the Appendix under Display
#1, TYPE/EDIT for information
about this screen display.

It is now possible to enter text on LINE# 0 by simply typing on the keyboard.

TYPING

Type as on any typewriter, using the shift key for upper case letters.

The Preamble to the Constitution was chosen as a sample text. The text is reprinted below, for convenience.

Start to type and note the following, as the typing proceeds:

The cursor does not blink.

Initially, the cursor is found under the "L" of the words, "LINE#0".

The first character typed will appear at the cursor position and the cursor will move one space to the right.

Each text line requires two screen lines (3 on VIC-20). For example, look at the second line of the sample text which is being typed on LINE#1. Note: On the screen the words "establish" and "domestic" appear on different screen lines and appear to be split; however when printed, the words will appear on a single line, exactly as they appear in the sample below.

Each text line is terminated automatically without splitting the last word. If the last word is too long to fit on the line, then the full word will appear as the first word of next line. A short beep is heard as the typing nears the end of a text line and is heard again as each additional character is typed. At the end of the word when the Space Bar is ordinarily pressed, a longer tone is heard. The tone continues to sound as the text line is moved to the top of the screen. Up to ten characters may be typed while the tone is sounding.

Below is a sample text for typing:

We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic tranquility, provide for the common defense, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

Now that the sample text is typed, note the following:

The last word of the sample text, "America" is on LINE# 5.

Press: **RETURN**. The tone sounds and the short line, which in this sample is just a single word, now appears at the top of the screen. The number of the line changed to #6 and, if desired, typing can be continued.

A text line has 66 characters. This number of characters is automatically set, everytime the program is LOADED and RUN. It can be changed to a larger or smaller number of characters per line using procedures described in the MANUAL.

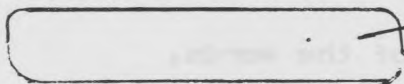
SAVING TEXT ON TAPE

The text that was typed is in memory on LINE # 0 through LINE # 5.

Put a fully rewound, blank tape cassette into the tape player.

To begin the procedure of saving the text, press: **f7**

Display will show:



Display #2 (OPTIONS MENU)

Note: Print on Tape - is OFF.

Press: **f2**

Display will show

Tape or Disk t/d ?

Autopositioning y/n ?

Press RECORD & PLAY on TAPE
OK

Disk and Tape versions only

Press: **t**

VIC-20 versions only

Press: **nl**

Press: **RECORD** & **PLAY**

Tape will run for a short time.

Display will show:

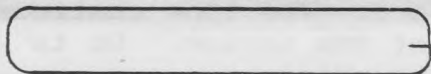


Display #2 (OPTION MENU)

Note: Print on Tape - is ON.

Press: **f7**

Display will show:



Display #1 (TYPE/EDIT)

Press: **f2**

This starts the Print procedure.

Display will show, in turn:

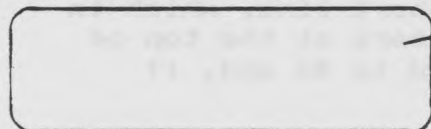
Specify Desired Range
of line #'s as:
Print
First, Last
?*
Printing
Lines 0,5

Type: 0,5 (note the comma).

Press: **RETURN**

Tape will run briefly because
sample text is short and when
it stops running:

Display will show:



Display #2 (OPTION MENU)

Print on Tape - is still ON.

Press: **f2**

Tape will run for a short time.

Print on Tape - is now OFF.

The procedure of saving is now completed and the text is on the tape cassette. (Fully rewind the cassette and remove it.)

The text that was saved on the cassette can be recalled, in the future by using the procedures described on the following page.

RECALLING TEXT FROM TAPE

It is easy to recall text that was saved on tape and put it back into the memory of the computer.

LOAD the program then rewind and remove the program cassette.

Put the cassette containing the text into the tape player and make sure it is fully rewound.

To begin the procedure of recalling the text, press: **f7**

Display will show

Press: **f1**

Display will show

Tape or Disk t/d ?

Autopositioning y/n ?

Press Play On Tape

OK

Display #2 OPTIONS MENU

Note: Read from Tape is OFF.

Disk and Tape file versions only.

Press: **t**

VIC-20 versions only

Press: **n**

Press: **PLAY**

Tape will run for a short time.

Display will show:

Display # 2 (OPTIONS MENU)

Read from Tape - is now ON.

Press: **f7**

Display will show:

Display #2 (TYPE/EDIT)

Press: **f4**

This starts the READ procedure.

Display will show, in turn:

Specify Desired Range
of line #'s as:

READ

First, Last

?*

Type: **y** to create
Multi-column text
Reading into
Lines 0,5

Type: 0,5 (note the comma).

Press: RETURN

Press: RETURN

Sample text is short so tape
will run briefly and text,
will quickly scroll by on the
screen. When tape stops:

Display will show:

Display #2 (OPTIONS MENU)

Read from Tape - is now OFF.

The procedure of recalling text is complete and the text is now in the memory of the computer.

Rewind fully and remove the cassette from the tape player.

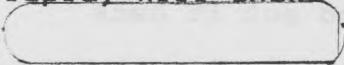
The text is still on the cassette can be recalled again at some future time or the cassette can be reused to save other text.

To continue typing and/or editing, press: **f7** and Display #1 (TYPE/EDIT) will return to the screen.

PRINTING TEXT ON PAPER

It is assumed that the sample text is in LINE# 0 to LINE# 5 and that the printer is connected and turned on.

To begin the procedure of printing text on paper, Press: **f7**

Display will show  Display #2 OPTIONS MENU
Note: Print On Paper is OFF

Press: **f3**

As each specification appears on the screen in turn Press: **RETURN**

Display will show

Start A Fresh Sheet

Enter y/n

Print Position ?1

Spacing ?1

Page Numbering? 1) none

2) at top 3) at bottom ? 1

Print Text Line #'s y/n

Number of Lines Per Page

? 54

Page Length In Inches

?11

Set Margin ?5

RETURN causes the following

Printing starts at current position

i.e. no initial skip to top of form

Start printed lines count with 1

Single space printing

No page numbers will be printed

No line numbers printed in margin.

Paper feed automatically after

printing the 54th line.

Set Form Length (11 inch standard)

Left hand margin will be 5 spaces.

Some printers will add:

Select Type Face 1) Standard

2) Emphasized 3) Condensed

4) Italic ?1

10 characters per inch, single
strike, non-emphasized, standard
type face.

Halt Print After Form Feed?

y/n

Assumes continuous feed forms.

Press: y for single sheet feeding

Proportional Spacing? y/n

Uniform spacing, no right
justification

Display will show

Display #2 OPTIONS MENU

Note: Print On Paper is ON

Press: **f7** **f2**

Display will show

Specify Desired Range

of line #'s as:

First, Last

Print

?*

Printing Lines 0, to 5

Type: 0,5 Don't forget the comma.

Press: **RETURN**

Printing will start.

At completion of printing:

Display #2

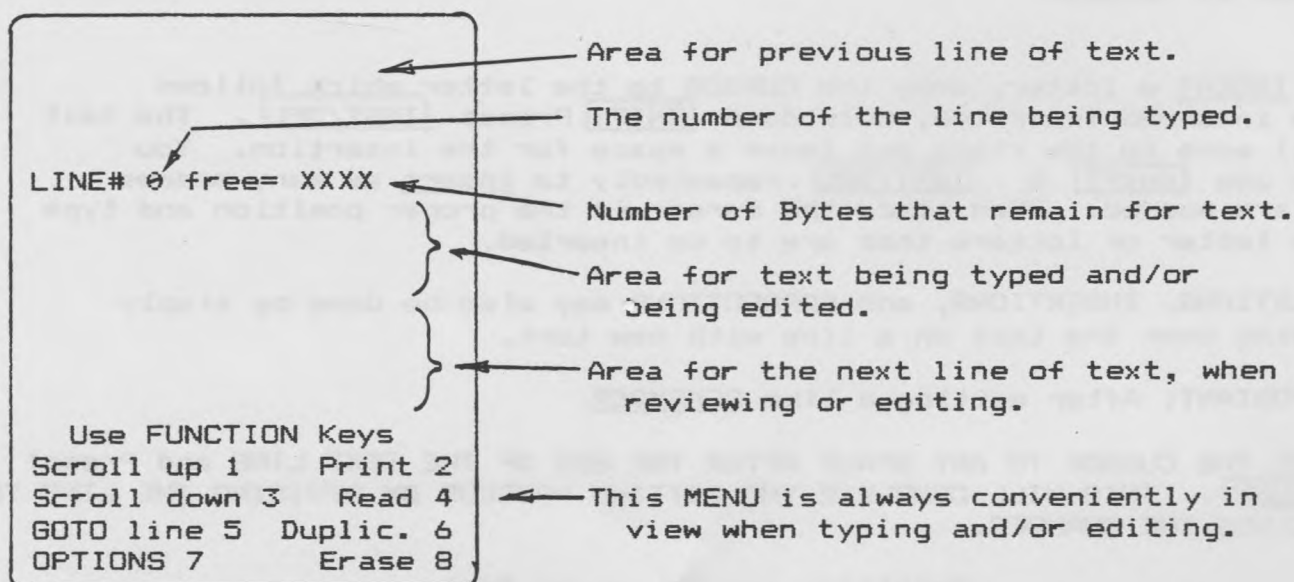
Display will show

Print On Paper remains ON

Press: **f3** Print on Paper is now OFF.

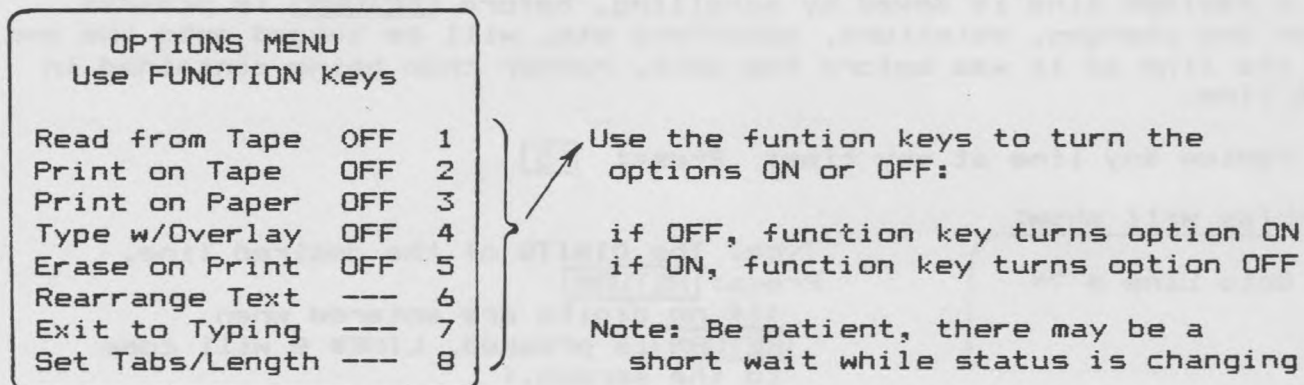
SCREEN DISPLAYS

TYPE/EDIT (Display #1) is on the screen whenever typing, editing or reviewing text.

**DISPLAY # 1****TYPE/EDIT**

Any time that Display # 1 is on the screen, f7 may be pressed to put Display #2 (OPTION MENU) on the screen.

OPTION MENU (Display #2) is on the screen when getting set to use any of the eight procedures listed in the display.

**DISPLAY # 2****OPTION MENU**

Any time that Display #2 is on the screen, f7 may be pressed to put Display #1 (TYPE/EDIT) on the screen. (Note that the word "Wait" appears briefly in the lower left corner of the screen)

For an explanation of the funtion keys (keys f1 to f8), see the Essential Controls section of the Basic Pointers page.

CORRECTING TYPING ERRORS

Use CURSOR controls in the regular manner as per the Commodore manuals.

To DELETE a letter, move CURSOR to the letter following the one to be deleted and Press: INST/DEL. Letter will be deleted and the text will move over to fill the gap. You may Press: INST/DEL as many times as needed.

To INSERT a letter, move the CURSOR to the letter which follows the intended insertion, hold down SHIFT Press: INST/DEL. The text will move to the right and leave a space for the insertion. You may use SHIFT & INST/DEL repeatedly to insert as many spaces as are needed. Then place the cursor in the proper position and type the letter or letters that are to be inserted.

DELETIONS, INSERTIONS, and CORRECTIONS may also be done by simply typing over the text on a line with new text.

IMPORTANT: After editing a line REMEMBER

MOVE THE CURSOR TO ANY SPACE AFTER THE END OF THE TEXT LINE and Press: RETURN. THIS WILL COMPLETE THE EDITING PROCESS BY REVISING THE LINE TO INCLUDE THE CHANGES.

Scrolling and Review of Text

To see an earlier line (Scroll up): Press: f1. Press once or hold down as long as needed.

To see a later line (Scroll Down): Press: f3. Press once or hold down as long as needed.

IMPORTANT: After any edit, deletion or insertion, be sure to move the cursor to any space after the end of the text line and Press: RETURN.

If a revised line is moved by scrolling, before RETURN is pressed then the changes, deletions, additions etc. will be tagged onto the end of the line as it was before the edit, rather than being contained in the line.

To review any line at any time: Press: f5

Display will show:

Goto Line # ?*

Type: The DIGITS of the desired line.

Press: RETURN

(if no digits are entered when

RETURN is pressed, LINE# 0 will come to the screen.)

The desired line is now on the screen ready for editing or review.

REARRANGING TEXT

Text which has been typed or read in from a tape or disk can be rearranged.

To duplicate or erase a line, first position the line directly under the LINE# space on the screen using **f1** **f3** or **f5**.

1. Press: **f6** to duplicate the line.
2. Press: **f8**, **y** to erase the line.
3. To insert a blank line between two text lines:
Press: **f4**, **f3**, **f8**, **y**, **f3**
4. To remove a blank line between two text lines: Press **f8**

To move a line or set of lines (block move)
Press **f7**, **f6**

Display will show:

Rearrange Text
Specify by
Starting Line, Ending
Line & Insert After
Line
Start,End,After
? *
Please Wait a Moment-
Moving Lines

Type: Three sets of digits.
Don't forget the commas
between the sets of digits.

Press: RETURN

Note: For a large text move, it
could be a minute or more,
after which:

Display #2 (OPTIONS MENU) returns and the text move is completed.

Note the following concerning Rearrange Text operations.

1. Moving text down, to higher line numbers is much faster than moving text up to lower line numbers.
2. Lines will be automatically renumbered to reflect their new sequence.
3. Text can not be erased using the rearrange text procedure.

SETTING-UP DISK OPERATIONS

Before a floppy disk can be used to store text, the disk must be "formatted". This is an automatic function of the disk drive. Place a fresh disk as removed from the box in the drive, and close the door. Use only single sided, soft sector 5 1/4" diskettes. Enter the following when the program is not running.

Type: OPEN 1,8,15 Press: **RETURN**

Type: PRINT#1,"NØ:NAME,Ø1" Press: **RETURN**

The disk drive will begin to run. After approximately 2 1/2 minutes the diskette will be formatted and ready for use. Programs, data from other programs, and text files produced by *Rapidwriter* may be mixed on a diskette. A diskette should be formatted only once in its useful life, typically rated at 400 hours of spin time.

Note: Each diskette in your collection should have a unique name and must have a unique 2 digit number. These should be recorded on labels affixed to each disk, and used in place of NAME and Ø1 in the sample entry.

After the diskette has been formatted, *Rapidwriter* can be loaded from the cassette tape. See page 4 of this tutorial. Once the program is loaded from tape, it can be stored on a diskette:

1. Place a freshly formatted diskette into the drive and close the door.

2. Type: SAVE"RAPIDWRITER",8 Press: **RETURN**

The screen will show

```
SAVING RAPIDWRITER
READY
*
```

You may now load the program from your diskette at any time. To load from diskette, place the diskette on which the program was previously saved into the drive, and close the door.

Type: LOAD"RAPIDWRITER",8 Press: **RETURN**

The screen will show

```
SEARCHING
FOUND
LOADING
READY
*
```

Load time from disk is
approximately 15 seconds.

Type: RUN Press: **RETURN**

Saving Text On Disk

Assuming a sample text is in the memory as per page 6 of this tutorial, and that the text occupies LINE# 0 to LINE#5. Press: f7

The Display will show



Display # 2 OPTIONS MENU

NOTE: PRINT ON TAPE, and PRINT ON DISK should both be OFF.

Press: f2

This display will inquire:

Tape or Disk t/d ?

Print file name?

Changing this file y/n?

Press: d

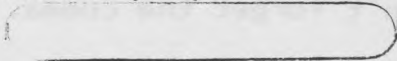
Type: testing

Press: RETURN

Press: n

The drive will run for a short time.

The display will show



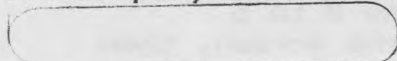
Display #2 OPTIONS MENU

Print On Disk will be on.

A disk file named testing has been prepared on this diskette.

Press: f7

The Display will show



Display #1 TYPE/EDIT

Press: f2

The Display will show

Specify Desired Range of line#'s as:

Print

First, Last

?*

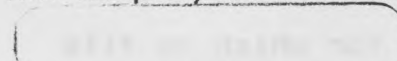
Printing

Lines 0 to 5

Type: 0,5 NOTE: Don't forget the comma!

This will flash briefly on the screen as the text is short.

The display will show



Display #2 OPTIONS MENU

Print On Disk is still ON

Press: f2

Display will show

Tape or Disk t/d?



Press: d

Disk drive will run for a short time. Print on Disk is now OFF.

The procedure of saving text on disk is now complete. This text can now be recalled using the procedures on the next page.

RECALLING TEXT FROM DISK

Place the diskette on which text was previously saved in the drive,

and close the door: Press: **f7**

Display will show

Display #2 OPTIONS MENU

Note: Read From Disk is OFF

Press: **f1**

Display will show

Tape or Disk t/d?

Read File Name

Press: **d**

Type: testing

Press: **RETURN**

The display will show

Display #2 OPTIONS MENU

Read From Disk is now ON.

Press: **f7**

Display will show

Display #1 TYPE/EDIT

Press: **f4**

This starts the read procedure.

Display will show

Specify Desired Range
of line #'s as:

READ

First, Last
?*

Type: 0,5 Don't forget the comma.

Press: **RETURN**

Press: **RETURN**

Type y to create
multi-column text
Reading into
Lines 0 to 5

The text in lines 0 to 5
will appear on the screen, then

Display will show:

Display #2 OPTIONS MENU

Read From Disk will be OFF

The procedure of recalling text from disk is now complete. The text remains on the disk. It can be recalled again immediately or at a later time. It may also be read into other LINE#s. Other texts stored on the same diskette may be read in, or the diskette may be removed and another placed in the disk drive. See the MANUAL for more disk procedures. Press: **f7** to change to Display #1 TYPE/EDIT.

In the event of either an attempt to recall a file for which no file of that name can be found, or an attempt to save a file with the same name as an existing file, the program will present a message to the user. The display will show "File exists" when attempting print a file name that is already on the diskette unless a **y** is entered meaning change the file. "File not found" will show when attempting to read a file and no such name is on this diskette.

In either case, Press: **RETURN**, The display will be Display #2, the OPTIONS MENU, and Read From Disk and/or Print On Disk will be OFF.

LINE GLUING

The effect of **INST/DEL** and **SHIFT** & **INST/DEL** are limited to three screen lines on the VIC-20 and two screen lines on the Commodore 64. Line gluing extends these functions to lines of up to 255 characters. There are character and block type gluing functions, and each type can PULL text to lower line numbers (up on the screen) or PUSH text to higher line numbers (down on the screen).

Type: **Simply Rearranged** Press: **RETURN**, **f1**
Press: **CLR/HOME** and repeat Press: **CLR/HOME** until the entire word **Rearranged** has been PUSHed off the line. Move the CURSOR to the letter **S** of the word **Simply**. Hold: **SHIFT** and Press: **INST/DEL**. Repeat until 11 spaces or more are opened to the left of the word **Simply**. Move the CURSOR to the lefthand side of this space. Press: The left arrow just above the CTRL key. Repeat left arrow (PULL) until **Rearranged** has been entirely PULLED up to first line. Move the CURSOR to the end of the line. Press: **RETURN**.

Press: **f1**, **f6**. Hold: **SHIFT** and Press: **PULL** (left arrow above CTRL). And again. Press: **f1**, **f6**, **SHIFT** & **PULL**. The line should now read:

Rearranged Simply Rearranged Simply Rearranged Simply Rearranged

and the word **Simply** (or **Rearranged** if you slipped up) will be on the next line. Holding **SHIFT** and Press: **PULL** will fill a line to the limit of the number of characters set for line length.

Move the CURSOR to the first character on the line. Hold: **SHIFT**. Press: **CLR/HOME**. Press: **RETURN**, **f6**. Hold: **SHIFT** & Press: up arrow (above the **RETURN** key). Hold: **SHIFT**. Press: **CLR/HOME**. Press: **RETURN**.

SHIFT and **CLR/HOME** has the limit of not allowing more than 255 characters be on a line at time. Lines longer than 80 characters can not be formatted properly for printing by *Rapidwriter* (132 characters using condensed print). These features are simply for editing convenience. The **MANUAL** covers applications of these features to advanced editing techniques. Here is a single example. Type:

We the People, in Order to form a more perfect Union, establish

Press: **f1**. Move the CURSOR to the comma after the word **People**. Hold: **SHIFT**. Press: **CLR/HOME**. Type: of the United States and Press: **RETURN**. Press: **f1**. Press: **PULL** (left arrow) twice. Press: **RETURN**. Press: **f1**. Hold: **SHIFT**. Press: **PULL** (left arrow).

The lines should now read:

We the People of the United States, in Order to form a more perfect Union, establish

Practice and familiarity with these four functions will greatly speed the editing process. There are many other uses for these features covered in detail in the *Rapidwriter* manual.

Rapidwriter

MANUAL

A Reference & User's Guide

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Rapidwriter

General Information

Please Read This Before Running The Program

1.1 Screen Displays

There are two major screen displays in *Rapidwriter*. Use f7 in either screen to switch to the other. As you type, the text will appear in the middle of the screen that shows the LINE# into which the text is being entered. This is called the type/edit, or TE screen. The second screen is the OPTIONS MENU, or OM.

The two screens are used together, for example, from the OM screen, pressing f3, Print On Paper, turns on the printer, and then in the TE screen f2, print will allow you to select the lines to be printed.

1.2 Line Length

Line lengths and tabs are user selectable. When the program starts, there is a single tab stop set at 5 characters, and the line length is set to a maximum of 66 characters per line.

1.3 Word Wraparound

The VIC-20 displays 22 characters per screen line. It takes 3 full screen lines to display a line as it would be printed on paper. The character on the far right of a screen line will be printed next to the character on the far left of the screen line below.

1.31 Word Wraparound On CBM-64 And With 40/80 Column Boards

These work the same way as a standard VIC-20. The differences are in the number of characters on a line, the number of screen lines required to display a printed line, and the number of text lines that can be displayed on the screen at one time.

2.1 Setting Up

Before loading the program do the following:

1. With your VIC off, install memory expander in your VIC-20
 - minimum required is 8K, and 16K is recommended.
1. Connect your printer. Turn on the printer and your computer.
3. You are ready to load *Rapidwriter*.

For program loading, typing and introductory editing instructions, see the *Rapidwriter* tutorial.

5.0 The Tone, & What It Means

5.1 Line Feed

There are two radically different ways in which *Rapidwriter* reads the text you wish to store in each line. As you type, the computer simply remembers each keystroke as it is made. When there are enough characters on a line to fill it (determined by the line length set) the

program performs a line feed, and starts storing characters for the next line.

5.2 Screen Read

Once you start to edit a line, by using the cursor keys, tab, INST/DEL, PULL or PUSH, *Rapidwriter* goes into screen read mode. It prints on the screen whatever characters you type, following the movements of the cursor. If the space bar is pressed when the cursor is at or passed where the line would end normally, or if you press RETURN, the computer reads the screen. It starts in the first position on the line, and reads each space in turn, until it encounters the cursor itself. Then whatever was on the screen between the first position and the cursor becomes the line as it is stored in memory.

5.3 Line Feed vs. Screen Read

Scrolling or review of text using F1, F3, or F5 bypasses the screen read process. Pressing RETURN will cause a line feed, and if the line has been edited at any point when it occupied the center screen position in the LINE# display, then a screen read will be performed as part of the line feed process.

Be aware that scrolling away from a line after it has been edited without first pressing RETURN will result in the edited line appearing in its original form with the edited characters tagged onto the end of the line rather than being contained within it. Spaces added to the line by movement the CURSOR with the cursor keys rather than the SPACE BAR will be omitted from the line.

5.5 Typing Speed

The screen read process is slower than the typing mode as you can tell by the longer time that the tone stays on. Keep in mind that the computer can remember only ten new characters that are entered during the time the tone is on, so hold off typing for a second until the screen read process is complete, and the tone goes off.

6.0 An Important Note On Quotation Marks

The " mark has a peculiar effect the computer. Characters between a pair of quotation marks are read differently than if they were not encased in quotation marks. To control this, the program displays a pair of quotation marks for each press of the quotation mark key. Since there are no characters between the pair, there can be no problems with them. That is, unless in editing a line, an odd number of quotes are left on the screen when the screen read function takes place.

6.1 The " Problem

If that happens, as long as that line is on the screen, there will also be all sorts of garbage all over the screen. There is an easy way to correct this problem, and many other equally easy ways to make it worse.

6.2 The " Solution

If you run into this always follow this simple procedure:

1. Use F1 and F3 to position the line with the offending odd number

marks in the center of the screen. It is easy to spot the "bad" line. When everything else on the screen looks a mess, the line with the odd number of marks will look fine and innocent when it is in the mid-screen area.

2. Press **f8** to erase the line, and "y" for yes to "Sure"

3. Now retype the line.

REMEMBER to erase both " of a pair!

7.0 Positioning A Line For Editing

7.1 Range Of Line Numbers

Lines are numbered 0 to 355 as they are entered. The program tracks the highest number used. *Rapidwriter* rolls over from LINE# 355 to LINE# 0 and the number stored as the highest number line is reset to 0. This number is also reset to the highest number used in print and read operations. It is not necessary to RETURN a line to reset this number, scrolling is sufficient.

7.2 Scrolling **f1** & **f3**

To position a line in the center of the screen for editing use one of three of the function keys to the right of the keyboard. **f1** scrolls the text up, to lower line numbers, **f3** scrolls down, to higher line numbers.

7.3 goto line **f5**

f5 allows you to select a line number for instant positioning in the center of the screen. Press **f5**, enter a line number, and press RETURN to use this feature. Entering the number 999 will position the line with the highest number you have used during a particular run of the program, and just pressing RETURN, without entering any number will bring line 0 into the center of the screen.

8.1 Tabs

The cursor can be positioned using the tab key which is the up pointing arrow above the RETURN key. Hold the SHIFT key and press up arrow to move the cursor to the first position on a line. Pressing the up arrow key alone will move the cursor in turn through the tab stops.

8.4 Repeating Keys

Note that pressing **f1** or **f3** makes all keys repeat until **RETURN** is pressed.

9.1 The Datasette Player/Recorder

The computer has a limited ability to sense switch positions at the cassette recorder. *Rapidwriter* tracks the way the program asked you to set the keys on the recorder but can't tell if you set them in some other way. When you are asked to press play and record, for example, it can't tell if you only press play. If you press play, and then press stop, it try to go on running, and assume you are still following directions. Follow the directions on the screen.

The messages and

directions that appear on the screen will vary depending on the last operation performed, and what you have asked to happen next. Following these directions will guarantee that your text will be stored and recalled without a hitch.

9.2 The Buffers

When you request that the computer print on tape or disk, text is pushed down a pipeline from memory to a buffer, or holding area, and then on down to the cassette recorder or disk drive. When the OM comes back up on the screen after a print cycle, part of what you have asked to be stored will already be on the tape or disk, and part of it will still be in the buffer. If at this point you were to ask to print more lines, the lines in the buffer are first pushed down the pipeline and recorded, and then the next batch is moved to the buffer, and so on.

9.3 Emptying The Buffers

Assume for the moment, that you have stored all the text you wish to save at this time. You must now push the last part of the text out of the buffer to the tape or disk. Pressing f2 in the OM, will empty the buffer. A mark will be recorded on the tape or disk that the program will recognize later when the text is being read as indicating the end of a block of text.

Thereafter, when reading text in from disk or from tape, and this end of text mark is encountered, the program will turn off the read cycle and show in the OM that the read function is OFF. This makes it possible to read text into line numbers other than those the text were originally written in. It also means that when text is read in from tape or disk, you need not know how much text there is to be read as the read ends automatically when the end of block mark is encountered.

The same lines can be read in over and over, into different line numbers, any number of lines at a time, into lines that already have text in them, or into blank lines. You can end a read cycle at any time by pressing f1 in the OM.

9.8 Autopositioning - VIC-20 versions only

This feature is used to keep separate blocks of text together on one tape, without having to mess around with the footage counter. Blocks are positioned by using the VIC's timer and fast forward on the datassette. A tape can be positioned at the start of as many different blocks, each about 40 feet long, enough for an overstuffed page, as will fit on whatever length cassettes you are using. (5 blocks per side of C-30 tapes)

Press f2 in the OM, Print On Tape. This time type "y", when asked if you wish to use autopositioning, and follow the directions. If you use a fully rewind tape, you could safely cheat a bit at this point, and just press any key on the keyboard when the program says to rewind the tape. A message will come up asking "forward to block#?". Type: 1 and press RETURN. The program will tell you to press fast forward on the tape. Do so. The tape will run for a moment or two, and then stop. More messages will come up. Follow those directions.

When the tape is ready to accept text, as indicated by a return to the OM with ON showing, go over to the TE screen, and output your text again. Remember to close the file by toggling Print On Tape to OFF (press F2 in the OM). To read the text you have just written on the tape, use aut positioning again to put the tape back at the place where you wrote the text. In the OM, press F1, "y", and follow the directions.

If you put more than about 60 full text lines in a block, say #1, then the next time you print on that tape, skip #2 and print into block #3, otherwise the part of the text that spilled over from block #1 into block #2 will be overwritten.

9.9 Simultaneous Tape Read and Print

It is possible to have F1 Read From Tape and F2 Print On Tape "ON" at the same time. It is, however, not recommended. The problem is the buffer, which is shared by these two operations and is only emptied when F1 or F2 is toggled OFF. The program will try to prevent you from using both at the same time, but does not make it impossible, or turn OFF one if you try to turn ON the other. The loss of text in such an automatic shutdown is worse than the confusion that will result from attempting to run both tape functions at the same time.

9.91 Disk Operations

Disk operations are faster, more flexible, and require less intervention from the user than tape files. Floppy disks, unlike cassette tape, are not very rugged, and in fact, can be erased by simply placing your fingers on the magnetic recording surface. The perfect combination of speed and reliability is obtained by using disk and tape files together.

9.94 Naming Files

After you press F2 in the OM and enter a "d", the program will ask you for the name of the file. Each text file on a disk must be named when it is first written. This name is the only way the file can be found later when you want to read the file back into the computer. Names can be repeated on different disks, but can be used only once on each disk. Names should be kept as short as possible.

After a file to be printed is named, the program will then ask if you are changing this file. Entering a "y" will cause the program to overwrite any text which has been previously stored on that disk under that file name with whatever you now put into the file. If you press a key other than "y" in response to this question, the program will check to see if there is a file on the disk with the name you have just entered. If such a file is on the disk, the program will print a message saying "file exists". Press any key, and this attempt to write on the disk will end. You can now restart the procedure.

9.95 Other Disk Read And Print Errors

An "unauthorized" attempt to overwrite a disk file, attempting to read a file which is not on a disk, and various other difficulties and problems can result in error messages when opening and closing disk files. In all cases pressing any key will erase the message, and return

the program to the pre-attempt status.

You can use these messages to check for a file name before writing a file of that name. Type a name, and enter something other than a "y" to the question "changing this file". If a file of that name is on the disk, a message to that effect will alert you, and you can then choose to overwrite it on a second try, or select a different name for your new file.

If you want to read a disk file and by mistake press f1 instead of f2, enter the name of file that doesn't exist, and the inadvertent read cycle will end. If you mistakenly press f2 instead of f1, enter the name of an existing file with an "n" for not changing, and the inadvertent print cycle will end.

NEVER remove a disk when PRINT ON DISK is "ON". The text in the file will be lost, and depending on what you do next with the disk, it could require reformatting.

ALWAYS TURN PRINT ON DISK "OFF" BEFORE REMOVING A DISK FROM THE DRIVE

9.96 Simultaneous Read And Print On Disk

Unlike the tape system, the disk system will allow you to simultaneously read and print on the same disk. The precaution here is that there must be two different file names being used. It is possible to read a few lines from a file, edit them, and print them into another file name, and then read the next few lines in from the first file and so on.

9.97 Mixing Tape And Disk Files

Each time you press f1 and f2 in the OM when running the disk version of *Rapidwriter*, the program will ask you to select "t" for tape or "d" for disk. If you have an active disk file that you are writing or reading, then entering a "d" will result in the disk file being closed.

Entering a "t" will start the file opening procedures for the cassette recorder. You can then have up to three active files going at once: two on disk, a read and a print, and one on tape, either a read or a print. Each request to the program that you now make (either to read or to print) that involves the function for which there are two open active files will require you to enter a "t" or a "d" to tell the program which of the files you wish to work with. The same question is used here in the TE screen as in the OM, and the same "t" or "d" will be used to enter your selection. You must select either "t" or "d" to break out of this loop, and pressing RETURN is not required.

9.98 Cataloging A Disk

As with tapes, the best way to keep track of what is recorded on a disk is to write and keep current labels stuck right onto them. If you need to find out what is on a disk you can do the following:

1. The program must NOT be running. This procedure will cause both text and the program itself to be erased from memory.

2. Type: LOAD"\$",8 and press **RETURN**
3. When the screen says "READY", type: LIST . Press: **RETURN**.
4. The names of the programs and files stored on the disk will appear on the screen. A procedure for printing these on your printer is in the 1540/1541 manual.
5. You will now have to reload *Rapidwriter* in order to proceed.

9.99 Disk Maintenance

Diskettes and disk drives are sensitive to dust, smoke, and particularly to cigarette smoke. The heads of your disk drive should be cleaned using special cleaning disks available for this purpose. You should do this after each two weeks of regular use.

10.1 Printing On Paper

Printer specifications will vary depending on the type of printer you have. What follows applies to *Rapidwriter* with an EPSON MX-80 with Grafrax PLUS. An addendum sheet is packed with your copy of the manual details the differences between the various versions.

Your printer is a separate computer. Turning the power off to your printer will cause it to forget the program that is sent to it from the computer as you go through the printer specification routine. Put in the paper and turn on the printer before pressing **F3**.

10.22 Print Position

The computer counts each line as it is printed. The number displayed as print position is the line count at the moment. If you manually move the paper then reset this number to the proper one. Normally, using 8.5" by 11" size paper, the program will print 54 lines on a page, allowing for top and bottom margins, and the space taken up by the page numbers. You can enter a lower number or even a negative number to fool the printer into thinking that it is higher up on the page than it really is, and thus force more lines than 54 onto the page. You can also force an early page feed, by entering a higher number. The line count resets to "2" automatically at the start of each page.

10.24 Auto Page Numbering

You can suppress page numbering by entering a **1** here, or select numbers at the top or bottom of each page. If you select page numbering, either at the top or bottom, then the program will ask:

10.25 Page Number

This is the number that will be printed the next time a page number is called for. Thereafter, page numbers are increased automatically by 1 each time a page number is printed, unless reset in this routine.

10.26 Print Text LINE#'s? (y/n)

The LINE#'s in the text file can be printed in the left hand margin next to each line as it is printed out. This facilitates finding the lines

in the computer's memory as you scroll through making corrections and changes.

10.27 Selecting The Type Face

You can specify either of two basic type styles here, standard and italic. Italics are always printed with emphasized print. Standard type face can be printed either in single strike or emphasized printing. You can also select the EPSON's compressed mode of print which allows for 132 characters per line.

10.281 # of Lines Per Page

The program will print whatever number of lines you enter here, and then form feed. The restriction to this number is that no more than 6 times the length in inches of the form minus 2 lines can be printed on a page. This is from 6 lines to the inch vertical spacing, and 2 lines minimum header.

10.282 Page Length

Standard forms are 11.0 inches long. If you are using some other length form, such as mailing labels that are 1.5 inches, enter their length here. The program will then check to see that the numbers entered here for page length and # of lines per page will work, and if not will tell you that they "won't work", and will return you to the "# of lines per page" question.

10.29 Setting The Margin

You may set any margin you wish here keeping in mind that the margin, and the line length you are using together must be less than the total number of characters that will fit on a line i.e. 80 for standard print, and 132 for compressed. Trying to print a line longer than will fit, will cause the end of the line to be printed on the next line below. Also, keep in mind that text line numbers, if requested, are printed in the left margin, and can take up to 3 positions.

10.4 Changing Specifications

To change specifications mid-page, such as the type face or margin, toggle the printer OFF, then ON again by pressing **F3** in the OM twice. Be careful to change only the specs you need to, so that the program won't lose track of such things as where it was on the page, and the page number.

When combining blocks of text into one long printed document, use these specifications to assure continuity of page numbers and print position. Toggle the printer OFF and ON again, and the last values for line and page number, page numbering on/off and margins will be displayed. Simply press **RETURN** to all specifications to pick-up a printing job where it was left off. Only the printing of line numbers in the margin will reset to OFF when the Print On Paper is toggled OFF.

If the power to the printer is turned off, or the paper is moved manually the specifications will have to be reentered.

10.71 Control Codes in Text Lines

In addition to printing the text line for line as it appears on the screen, *Rapidwriter* provides for codes to be inserted into the text which will alter the finished appearance of the text as it is printed.

These codes must be entered in the first position of a line to control the printing process.

Hold: **SHIFT** Press: **Minus Key (-)**

Causes the printer to skip to the top of the next sheet. The balance of the text on the line will not be printed.

Hold: **SHIFT** Press: **Asterisk (*)**

The line will be printed at twice the size specified. Therefore in standard size type, 40 characters, and in compressed mode, 66 characters will fit on a line. If the text line is too long to fit on a single printed line when doubled in size, the function is bypassed.

Hold: **Commodore key** Press: **Asterisk (*)**

The Commodore key is in the lower left corner of the keyboard. The line will be automatically centered on the page when printed.

These three control characters must be in the first position on the line. To center and print a line double size, enter **COMMODORE *** first, then **SHIFT ***. Centered means centered on the page. When mixing short lines with centered headings, the margin will have to be adjusted.

10.72 Printing More Than One Line From Single Lines Of Text

The control code for skip to the top of the next page, (SHIFT -) has a different meaning if it is placed in a line anywhere but in the first position on the line. It will then cause the printer to line feed. Therefore more than one printed line can result from a single text line in memory. This can be used to insert blank lines in a printed text, or to enter a name and address on one line in memory, and have it be printed on 3 or more lines on paper.

10.75 Short Forms And Labels

To print short forms, mailing labels, for example, that are 1.5" top to bottom, enter the form length in inches. Non-standard bottom margins are controlled by either by adding the correct number of blank lines above and below your text to position it on whatever form you are using, or by setting an appropriate number of lines per page and page length when you turn ON PRINT ON PAPER in the OM.

A top of form character in the text to get the printer to skip to the top of the next form will also serve as control for vertical margins.

10.8 Underlining

Underline suitable for headings can be printed by VIC 1515 and 1525 printers. Enter on the line below the line to be underlined a character which will then cause dashes to be printed under the heading. The key to use is the Commodore key plus the letter "T" which will print on the screen as a line.

EPSON and other printers are equipped to underline directly through

the use of embedded printer control codes described below.

10.91 Printer Control Codes

To enter subscripts, superscripts, in-text underlines, and change type face while printing:

Hold: Commodore Press: - (minus key) called the escape code

Then enter the shift into code for the function desired by pressing the correct key listed in the table below. To restore printing, again enter the escape code and the appropriate shift out key selected from the table below. This table applies only to Epson printers with Grafrax PLUS. An addendum sheet is included with each copy of the program listing the codes to be used with that version of the program.

Function	Control Code To	Shift Into	Shift Out
Italics		4	5
Disable Paper Out Function		8	9
Emphasized Mode		E	F
Double Strike Mode		G	H
Compressed Print VF	(use lower case)	p	q
Underline		-1	-0
Superscript		S0	H
Subscript		S1	H
Unidirectional Printing		U1	U0
Shift out of unidirectional printing after using an H code. This will restore full printing speed			
Double Width Printing		W1	W0

Use of these codes is entirely optional. Normal printing, including emphasized, italics, double width etc, does not require these codes. They are only used to change type faces in the middle of a printed line, and for other "fancy" printing effects.

10.92 Effect of Control Codes On Line Length

Control Codes are not printed, but are included by *Rapidwriter* in the character count used to determine where lines are to be cut-off automatically. Line length may be changed in the OM to fit these characters on the line, or overflowed characters from a line may be pulled back using PULL (left arrow) and then f3 to complete the line instead of RETURN.

10.93 Centering Lines With Embedded Control Codes

Use of the autocenter printing feature for a line that has embedded control codes requires that you insert blanks between the control codes and the actual words you wish to print. Add one blank for each control character, but printing a rough copy to check alignment is always advisable for any complex printing job.

11.1 Type With Overlay f4

When Type w/Overlay is ON, LINE# 0 is printed on the screen after each line is RETURNed. Then the cursor returns to the first position. If you type over the copy of LINE# 0 which is printed there, or press RETURN, then that line will be a blank, or whatever you have typed there. If you move the cursor to the end of the line as it is displayed, the line will be a duplicate of LINE#0.

11.2 Set-up For Overlay

In the TE screen, goto LINE#0 (press F5, then RETURN), and make sure it is blank. Now go over the the OM, using F7, and toggle F4 in the OM to "ON". Go back to the TE screen, and enter the following in LINE# 0:

Namebbbbbbbbbbbbbb#bbbbbbStreet

where the "b" means blank or space bar

and press RETURN. Look closely at LINE# 1 when it comes up on the screen. It appears to be a duplicate of LINE# 0. Press RETURN. Now look at the top of the screen where LINE# 1 is displayed, and look at LINE# 2 in the center of the screen. LINE# 1 is a blank line, and again LINE# 2 appears to be a copy of LINE# 0. Cursor down, so that the cursor is somewhere beyond the end of LINE# 2 as displayed in the center of the screen, and press RETURN. Look at the top of the screen, and LINE# 2 will now appear as an actual duplicate of LINE# 0. Use F1 to scroll up twice, which puts LINE# 2 at the bottom of the screen, and LINE# 0 at the top with LINE# 1 in the center. Go over to the OM, toggle F4. Typing W/Overlay "OFF" and go back into the typing screen. Note the difference between LINE# 1 as shown with F4 ON and F4 OFF.

11.3 Uses For Type w/Overlay

Here are just two of the many uses to which you can put this feature:

1. Data entry

Enter a date or other repetitive data in LINE# 0, and you can then use Type w/Overlay to put that data into succeeding lines. Tab over the date to put it into the line, type over it to change it in that line, and go back to LINE# 0 to change it for the next batch of lines.

2. Headings and Prompts

Enter in LINE# 0 the headings, or prompts for a series of entries to be made to a line. These will then appear on the screen as you enter each line to serve as reminders of the information to be entered on each line, and the position each part of your entry is to have on the line.

Set tab stops to the appropriate places which will allow tabbing between

the entries on each line, thus adding even more speed and accuracy to data entry tasks. Setting tabs is covered below in this section. Type with overlay also plays an important part in the calculator function of *Rapidwriter*, described in the Advanced Techniques section.

12.1 Erase On Print f5

If **f5** in the OM is ON, after a line is printed it will be erased from memory. The line number and space the text occupied are now free to accept new text. Erase on Print can be cycled alone with the printer, tape, and disk OFF. Text may be retained in memory until proofread. Then, when there is no need to print further refined copies, it can be erased in a separate print cycle.

12.3 Erase Only Print Cycle

To erase text in a separate print cycle, turn **f5** ON in the OM, and specify the lines to be erased just as if it were any other print operation. Remember to toggle **f5**, Erase on Print OFF when the cycle is complete.

14.1 Set Tabs/Length f8

In the OM, Press: **f8** to reset the line length and the tab stops. Lines can be set to any length that will fit on the screen and the line length allowed by your printer, but as a practical matter, 80 character lines are about all that should normally be used.

14.2 Setting Tabs

Rapidwriter allows for up to ten tab stops to be set by the user. When the up arrow key above the RETURN key, the cursor will move in turn from the first tab set to the last, and then start over again at the first position on the line.

The numbers used for tab stops need not themselves be in sequence, i.e. the third tab could be set to position 10, and the fourth to position 3. The program will accept a tab stop for a position on the line beyond whatever line length is set. But when such a tab is called for, the cursor will go to the first position on the line instead.

14.3 Setting Line Length and Tab Stops

1. In the OM, Press: **f8** (SHIFT & f7/f8)
2. Type: the digits for the number of spaces from the first position that each tab is to be set to. Press: **RETURN**.
3. Type: 0 Press: **RETURN** to go back to the OM.

Line length and tab stops can be reset at any time.

15.3 Defeating Automatic Line Feed

When typing, a line feed occurs when either **RETURN** is pressed or at the first press of the **SPACE BAR** after a line is as long as the line length selected (minus one character). Use of the **CRSR** right key instead of the **SPACE BAR** allows a line to be continued as long as desired, up to 255 characters. When the **SPACE BAR** or **RETURN** is pressed, the excess will be removed from the line automatically and inserted in the next line, preceeding any text previously stored there.

15.32 Overstuffing Lines

Characters dumped from a line can be **PULL**ed back up to the line. Press: **f3** instead of Press: **RETURN**. This allows the line to remain overstuffed; useful when compensating for printer control characters which skew the character count. Press: **SPACE BAR** before starting to **PULL**, to separate words, not the **CRSR** key.

15.41 Reformatting Text

The major use for **PULL** is in reformatting text after deleting letters, words, or phrases from a line. When words are removed from a line a word or words need to be **PULL**ed up from the next line to refill the line to the proper length, leaving the next line short, and so on. Compensating for a deletion might require a whole paragraph to be reformatted. The four line gluing procedures described in the tutorial solve this problem in all it many varieties.

A few words of caution about using these features. Hold: **SHIFT** Press: **PULL** operates regardless of the position of the cursor. It takes the line as stored in memory, and works with that. Hold: **Shift** Press: **CLR/HOME** likewise works with the line as last stored in memory. Either of these must be the first step in editing a line. If a line has been edited in some other way, then before using these features, Press: **RETURN** to get a screen read which updates the memory, then Press: **f1** to reposition the line for further editing.

15.6 **PULL** and Blanks

Remember to **PULL** not only a word, but the blank that follows and separates it from the next word on a line. Otherwise, when the line feeds, an extra blank will be inserted.

15.7 Practice

Editing in *Rapidwriter* using all the features of insert, delete, **PUSH**, **PULL** both in their character and block modes is in some ways like learning to play a video game. The six kinds of edits, along with the ability to duplicate and erase lines, add and delete blank lines, and move the **CURSOR** around on a line to type over errors mean that for any editing situation there are several approaches to the same problem. Only practice and familiarity can be your guide. As with the case of embedded printer control codes, the advanced features are not necessary, but they are part of what separates true word processing from mere typing. Users are urged to type in a text, store it on tape or disk, and then read it in repeatedly editing it in various ways and printing the results. With practice, you will find that your hands will move

quickly to the proper keys, and combinations of editing tricks will become habit.

Keep in mind a few things about *Rapidwriter*. It inserts blanks between lines that are glued together. Trailing blanks on a line are dropped. Scrolling bypasses elimination of trailing blanks, cascade of overflow text from lines, and updates of memory to contain edits within a line. Scrolling simply adds new characters onto the end of the line. The tone means memory update, and a long tone means screen read. No more than ten new characters can be entered while the tone is sounding. Characters typed in after the tone becomes steady will be added to the end, not the beginning of the next line, if the next line is already full.

17.1 Lists

Combining the features Type With Overlay and multiple line print from single text lines makes it possible to have lists of names and addresses printed as 3 or four line labels from data entered and stored as single lines. Setting tabs to the proper places, and adding the printer control character to force a printer line feed to the overlay will greatly speed the process of preparing such mailing lists. Pin feed rolls of address labels are available at commercial stationers. Using a form length set to the vertical spacing on these rolls, and the correct number of lines for each label, plus whatever extra line feeds are required to force a form feed will make the printing of such rolls of labels automatic.

Form letter processing is also possible with *Rapidwriter*. Using the mailing list described above, store your mailing list on tape or disk. Enter your form letter, then alternately read a name and address line entry into the appropriate line number of the form letter, and print out the letter.

18.1 Multi-column Printing

Rapidwriter can combine separate texts into a multi-column page. This feature speeds preparation of newsletter, scripts, and financial reports.

Financial reports have fixed data (account numbers and names) in the lefthand side of the page combined with variable data (actual account status) on the righthand side. Keep one tape or disk file for the fixed information and combine it with the updated variable information each time the report is reprinted.

Newsletters can be typed in a column at a time, edited, and proofread, then combined to be printed as single complete pages.

Scripts can be prepared with dialogue in one file, and stage directions in another. Combining the two for printing will greatly simplify the typing task.

When the read cycle is started (Press: **f4** in the TE) the program

requests that you press "y" to create a multi-column text. If you do so, the program will then ask you to specify the width of the lefthand column. Once that number is entered, the program will proceed to do the following:

1. If the text in a line in the specified range is greater than the width specified, it will be cut off at the specified width.
2. If the text in a line in the range specified is less than the width specified, it will be filled out to the specified width by the addition of trailing blanks.
3. To each line in the specified range, a line, read in from the tape or disk, will be added.
4. When printed out, these two lines, which now share the same line number, will be printed side by side.

18.2 Operation Of Multi-column Feature

To make use of this feature, one need only observe the following precautions:

1. The sum of the number of characters specified for the left hand column, plus the number of characters in the lines being read in, added to the margin specified when the printer is toggled in the OM should not exceed the maximum number of characters which the printer can actually print on a line.
2. There should be no embedded control characters in either of the two texts. i.e. no skip a line, centered, double size or skip to the top of next page characters.

18.2 Preparing Text For Multi-column Print

Set the line length for each column of the final text to an appropriate number, then type, edit, and save each text separately on tape or disk. Print them separately with text line numbers in the lefthand margin (see printer specifications), and use these two rough copies to edit both texts so as to be sure that the line numbers line up. This will involve adding blank lines to one or the other of the two texts to assure that, when combined by the computer, the lines will match up correctly. It will be awkward at best to edit the combined texts.

Reset the line length specification in the OM to be sufficient for lines of the combined text, before starting the combining process. Now resave the two edited texts, and then read them back in, first the lefthand, then the righthand text.

Once the texts have been combined, the combined text can be printed, saved on tape or disk, or edited. Each line as displayed on the screen will be showing what might be called two half lines. Use of insert and delete or almost any other normal editing function will probably only serve to scramble the two columns all over the printed page.

19.1 Procedural Editing

Rapidwriter allows you select from a text in memory the lines that are to be printed on paper disk or tape. Selection is also possible of lines to be read in from tape or disk, and where in the memory they will be placed. There is available, in effect, a larger scale editing process than is possible to achieve in memory. Whole pages can be switched around in this manner, and blocks of text that were typed in one sequence can be printed out in entirely different sequences.

To facilitate this process, it is handy to keep a piece of scrap paper by the keyboard to record lines numbers and scratch notes indicating the sequence and status of various parts of the text.

It might be necessary at times to read in a whole page of text, a few lines at time, in order to pull out of it a few lines that you wish to insert somewhere else. To then get some other part of that text relocated to yet another place might require rereading the whole text in again. For these reasons, as a general policy, it is best to keep individual text sections as short as is practical, and to combine them in the final print out into longer texts. Of course, with disk systems, as long as you don't remove a disk from the drive while files are open, procedural editing, with two open files can extend to 25 pages of solid text in each of the two files, the read and the print which are sharing the 50+ page capacity of a single disk.

It is faster to run two separate print cycles to put a block of text that is in say lines 0 to 30 on a printed page after a block that is in lines 150 to 180 than it would be to use Rearrange Text. The latter approach would get the text in the proper sequence in memory, but that is not a requirement for getting the text in the proper final sequence on paper when using *Rapidwriter*.

20.0 Calculations

20.10 VIC Modes

The computer operates in two modes. It is in program mode when *Rapidwriter* is running. It is in immediate mode when you first turn it on, and type LOAD, and RUN.

20.11 Immediate Mode

In the immediate mode, the computer can be used as a calculator, responding directly to instructions like $2 + 2$ and $6 - 7$. When the calculator mode is engaged, the computer goes into immediate mode, *Rapidwriter* per se, stops running, and the computer receives instructions directly from the screen and the keyboard.

20.21 Use Of The Calculator

To engage the calculator mode:

1. Anywhere on a line, Hold: **SHIFT** Press: **[+]**. Release **SHIFT**. Press: **CRSR →** Press: **RETURN**.
2. At the top of the screen will appear the following:

```
break in 4502
ready.
v=v
:cont
```

and whatever was in the line you were on, except the + sign.

The cursor, solid black, will be blinking right on the first v of v=v.

3. Press: **RETURN**

4. The display returns to the TE screen, + is gone, replaced by 0 .

Try it again, only this time, cursor to the right, to the second v of v=v, and type over it with the number 8000 so it reads "v=8000".

Press: **RETURN**. 8000 will show up on your line.

20.22 Precaution

DON'T type over the first of the two v's, at the lefthand edge of the screen. That would create a new line in the program, line 8000, and a program change. The computer would clear itself of any variables stored in its memory, and then crash, and would have to be reloaded.

20.23 Entering Expressions

Instead of a simple number, you can enter a complex expression like: v=3.45*(67/21)+(2.3145*.045) and get the answer in your line. You can use the answer in the next calculation, it is v. If the expression you wish to enter is too long to fit between "v=" and ":cont", use **SHIFT INST/DEL** to get more space. The limit here is 88 or 80 characters depending on your system.

20.30 Syntax Errors

If the expression entered contains a syntax error that can't be evaluated in BASIC, the computer will crash, with a "can't continue" message. Type: goto 3 Press: **RETURN** to recover. Try reentering the expression again.

20.41 Chain Calculations

Calculations can be chained. Multiple entries can be made to the calculator mode from a single text line. Variables other than V can be used in expressions:

v=v:tt=v/1.3 but tt won't be printed. It can be accessed later by entering v=tt.

20.42 Variable Names

Rapidwriter uses a whole alphabet soup of variable names itself, and if one of these values is changed in the calculations, the program will crash. BASIC recognizes only the first two characters of variable names. The following real number variable names are used by *Rapidwriter*: au, b, bm, c, ci, ct, d, ed, fi, fr, h, hr, i, ia, k, l, ld, mu, n, p, qw, r, sa, sr, t, tb, tr, v, wd, x, z. Integer variables are y1%, y2%, y3%, and y4%. Any others are alright to use in calculations. Once you

have this part of it under your belt, you are ready to start writing text file "programs" for your wordprocessor.

20.12 Relationship To Basic

The Commodore manual has all the details on using the computer as a calculator including how to write numerical expressions using correct BASIC syntax.

20.5 Programming the Calculator

For a single calculation, or a number of different calculations, *Rapidwriter's* normal calculator mode will speed your work. But, to perform repeated calculations of the same type, such as tabulating data, reentry of the numbers and formulas can be error prone and slow. *Rapidwriter* makes it possible to write a text line in BASIC to handle repeat calculations. This "one liner" can be stored and recalled right along with the data and results in an ordinary *Rapidwriter* text file on tape or disk.

In order to perform calculations, taking numbers out of a line and working with them, without requiring a second entry of the numbers, two values need to be passed to the computer:

1. Where on the line the start of the numbers can be found.
2. How long the numbers are i.e. how many digits.

Three functions in BASIC make it possible to write text "programs" to evaluate expressions. These functions are:

1. MID\$ allows part of a line to be treated as a separate unit.
2. VAL converts strings(letters, numbers etc.) to numerical values. Letters in the part of the string being converted are valued as 0.
3. STR\$ converts a number back into a string, so that it can be combined with other strings (concatenated) to form a line.

20.6 Writing Calculator Programs

a\$(r) is the line displayed in the mid-screen area (r is the line counter variable). Parts of a\$(r) can be extracted using MID\$. So, mid\$(a\$(r),22,5) would be the 22nd character through the 27th character of whatever the current line is. This extract of the line is converted using VAL i.e. val(mid\$(a\$(r),22,5)) into a number that can be combined with other line extracts into expressions that the computer can evaluate:

```
v=val(mid$(a$(r),22,5))+val(mid$(a$(r),44,5))
```

Then v is converted back into a string, and struck right into the place in a\$(r) where the + was. See line 4503 for this trick.

To illustrate this process, below are the steps to write, enter, save, and reuse a one line program to keep a checkbook.

20.7 The Checkbook Program

1. Define the problem

- To keep a list of checks and deposits and the current balance;
- To store, revise, and print this list; and use *Rapidwriter* to perform the arithmetic, filing, and printing.

Output: printed lists, and tape or disk updates

Formula: Old Balance + deposits - checks = New Balance

First we define a format. Enter into LINE# 0:

DatebbbbbbDescriptionbbbbbbbbbdepositbbbbbbbbbcheckbbbbbbbbbBal.

where b means type blanks using the space bar.

This is the overlay, a guide for entry of the numbers. It is also the column headings for printing out lists of checks.

Set the line length to accept this. In the OM, Press: **f8** Type: 76
Press: **RETURN**. Set tab stops at 29, 44, and 66. When running the program the tabs position the entries: at 29 deposits, at 44 checks, and at 66 Hold: **SHIFT** Press: **+** to enter the calculator mode.

Now enter the overlay into LINE# 0. Check the tab stops against LINE# 0 for alignment. Edit LINE# 0 until, by pressing up arrow, the cursor can be moved to the start of each field of LINE# 0 in turn.

The formula, converted into a line of BASIC goes into LINE# 1:

```
bbbbbbbbb+val(mid$(a$(r),29,7))-val(mid$(a$(r),44,7))
```

Be sure to enter the leading blanks on this line. Put a note in LINE# 2 to record the line length and tab stops being used for future reference.

Now the overlay and the formula must be combined into LINE# 0 so it can all work together. To complete the set up:

1. Scroll to LINE# 0. Press: **SPACE BAR** until the cursor is just at the spot before it gives an automatic line feed. This might require make 2 or 3 tries to find.
2. Hold: **SHIFT** Press: **up arrow** Press: **CLR/HOME**.
3. LINE# 0 will glue down to LINE# 1. DON'T PRESS RETURN.
4. Press: **f1** Press: **f8** DON'T PRESS RETURN.
5. Scroll to LINE# 4, then go to the OM, turn on f4, go back to the TE screen, and start entering data.

With f4, Type w/ Overlay in the OM turned ON, the overlay will appear

on each line as a guide to data entry, the tab stops will help position the cursor to speed up data entry, and the formula will come up automatically each time the calculator mode is entered.

Starting on LINE# 4, enter the date, then write "Old Balance" right over the word description, and then press up arrow to tab to the deposit position. Type in the old balance, and use the space bar to erase the rest of the word "deposit", and tab again, twice.

Hold: **SHIFT** Press: **+** Press: **RETURN**

The formula will appear at the top of the screen. Press: **RETURN**
That is the finished line. Press: **RETURN**. Start entering deposits. Then enter checks. For each line, Hold: **SHIFT** Press: **+** Press: **RETURN** (3 times). Every line shows the running balance. The results can printed at any time.

For descriptive data, use the excess space on the line. Don't use insert or delete on these sort of lines, as it will most likely cause things to get out of alignment, and the position in which these characters are entered on the line is critical, as can be seen from the above formula.

20.8 Calculator Programs, Reentry

The calculations need not be performed as the data are being entered. A proof list can be printed so that the entries may be checked. Then, set a single tab stop at 66, and start at the top of the list, tab to 66, Hold: **SHIFT** Press: **+**, **RETURN** 3 times, and so on.

Turn OFF f4, and then enter the calculator mode on a blank line, to enter corrections to the last balance.

The "program" and data can be saved on tape or disk just like any other text. To restart the text file "program", read it in. Scroll down the list to a free line. Enter the closing balance into v as described above for corrections, then set f4 ON in the OM, and add the new checks and deposits.

21.9 Color

Different TV's and monitors will display colors generated by the computer with varying degrees of clarity and brightness. The colors used by the program can be altered to suit. Possible color variations for *Rapidwriter* include:

1. screen and border combinations
2. color of the cursor
3. color of text print

By making changes improvements in the appearance of displays on black and white sets as well as color TV's and monitors are possible. These procedures are not relevant to 40/80 video boards which generate a fixed b/w image. The procedures are slightly different for VIC-20 and CBM-64 machines.

21.911 VIC-20 Screen and Borders

Refer to the chart on page 134 in the VIC-20 User's Guide.

Screen/border combinations are changed together by a single number. On the chart is the breakdown of all the combinations. Now look at line 600 of *Rapidwriter*. With the program loaded, but not running: Type: LIST 600 Press: RETURN. The integer variable y3% should be set equal to the number of the screen and border combination you wish to try. Move the CURSOR to the right of the y3%= and type in your selection. Press: RETURN. The change is now part of the program.

21.912 Commodore 64 Screen And Border Combinations

Two variables are used in the "64". y3% is the background, and y4% is the border. The chart with the color choices is in the Commodore 64 User's Guide on page 61. Try different combinations in line 600 until you are satisfied. The other locations being poked in line 600 control sound, and should not be altered.

21.921 VIC-20 And CBM 64 Cursor Color

Cursor color is independant of the screen and border combinations. In line 600 y2% is the variable controlling cursor color. Select from page 61 (CBM) a value for y2%, and enter it in line 600. For the VIC-20 use one less than the number of the key that the color is shown on the keyboard i.e. black is on the 1 key and a black CURSOR results from using y2%=0 in line 600.

21.931 VIC-20 & CBM-64 Text Print Color

This is tricky. In line 600 note the printchr\$(14),"e": at the beginning of the line. You will need to maintain a corresspondance between the letter in the quotations and the number entered as the value for y1%. For the 64, the chart on page 56 will guide you as to entries for the character in quotes, and the chart on page 61 gives the values for y1% with the matching colors. For the VIC-20, the character given by typing a quotation mark, holding CTRL down, and pressing the number of the color key you prefer will do the trick. Make sure it all matches. Enter your choices in line 600. Press: RETURN Type: RUN Press: RETURN

To test the changes, type a few words. If all is well, when the CURSOR is moved left over the text on the line, the letters will in turn change to the color of the cursor, and return to your chosen text print color. If that doesn't happen, then there is a mismatch between y1% and the character in quotations on line 600. Try again.

Once everything is satisfactory, you are ready to save your own customized version of *Rapidwriter*. Put in a fresh tape, don't use the program tape you purchased, and write: SAVE and press RETURN. Follow the directions on the screen. Now you can use this version instead of the original.

21.0 Crashes and Recoveries

As long as the directions in this manual are followed, and two problems outlined below are avoided, there is no way that the program will

"crash" or stop running. If, by actions that are possible, but not recommended, or through some other error, the program should crash, a complete recovery -getting the program running again with all the text you have entered safe in the computer's memory -is always possible.

21.1 Quotation Mark "

One problem, involving the use of the " mark was discussed elsewhere. Recovery from that problem is explained there. (see 6.1)

21.21 Memory Overflow

The other problem involves the size of the memory. As you fill the memory, there comes a point when the computer will simply hold no more text. It will crash.

21.22 Symptoms

As the amount of memory free (the number displayed to the right of the line number in the TE screen) goes down, the program will appear to slow down. This is a signal that the computer is running out of room to manuver and needs to have some of what has been entered output and/or erased. The cursor will at times disappear for about 3 seconds, and then reappear. Things will proceed as usual after these hesitations. This is symptomatic of the memory getting overly crowded.

21.23 Recovery

If the program should crash from running out of memory, three things will happen. First, a message "out of memory" will show on the screen. Second the word "ready" will be printed and there will be a solid cursor blinking on the screen.

1. DON'T PANIC

2. Don't Type: RUN

3. Don't Press: RESTORE

4. DO: Hold: SHIFT Press: CLR/HOME

5. Type: goto 3 Press: RETURN

If the screen that comes up is not the typing screen, Press: f7.

Press: f8 in the typing screen to erase the last line, and free up some memory.

21.24 Repeated Crashes

If text is now printed and/or erased, things should proceed normally. In the rare occurance, that the program crashes again, repeat the process but this time type: a\$(r)=b\$:goto 3 and press RETURN

Either output or erase some text, or the program will crash again.

21.31 Deliberate Crashes

The program can also be crashed quite deliberately by pressing the RUN/STOP key. For example, you start to print a text on paper, and suddenly realize that there is no paper in the printer, no copy of the

text in a file, and the program is set to erase on print. Your work is going off into oblivion. Press: RUN/STOP. Type: goto 3 . Press: RETURN. Things will return to normal.

Print a line or two on scrap before restarting the actual printing of good copy. Some text might be in transition to the printer, and needs to be cleaned out.

21.32 Restarting

The same procedure will assure a neat recovery from starting to print onto a tape which has text you don't want to be overwritten, or reading from a blank tape etc etc.

21.40 Secondary Crashes

21.41 Closing Files

Deliberating crashing and restarting a print or read operation might cause a second crash. The computer accepts instructions to close a closed file, but will crash if requested to open a file that is already open.

21.42 Appearance Of Secondary Crashes

If this should happen, the error message on the screen will be "file open error"

21.43 Closing Files

Type: close 2:close3 Press: RETURN
Type: goto 3 Press: RETURN

This will work for tape files. Disk files are another matter. Review section 10 of the MANUAL on disk operations. It is best to deal with disk file handling errors without using RUN/STOP.

21.5 String Too Long

A crash will occur if you try to PULL to more than 255 characters onto a line from those below it, which puts the cursor down in the control menu at the bottom of the screen. The message "string too long error" will be displayed. Type: goto 3 Press: RETURN. There is almost no way this would happen normally, but you can get a "string to long error" another way.

21.61 Tape Read Errors

Moving the tape around in some way other than how the program directs, or removing it from the recorder before F2 Print On Tape is OFF, could mean that when the tape is read back in, the computer will be looking an end of line, or end of text that isn't there. The result is "string too long error", and the recovery is the same. Type: goto 3 Press: RETURN.

21.7 "RUN" and RUN/STOP & RESTORE

Typing the word "run" when program is crashed, or pressing the RUN/STOP and RESTORE at the same time, will wipe out whatever you have typed into your computer. Cold, clean, no recovery, unless the text was

saved on tape or disk.

21.82 Follow The Manual

Remember, there is a neat clean way to do just about anything you wish with *Rapidwriter*, and it is quite sturdy and immune to incorrect entries. Reading the manual, and following the directions is the single best thing you can do to assure smooth trouble-free operation.

21.84 If You Have Trouble...

If you should encounter a problem, and this manual either doesn't cover it, or fails to provide adequate advice, or if you should follow that advice, and the program doesn't do what the manual says it will, then please get in touch with us. This is the only way we will be able to continue to perfect our product.

22.0 A Tour Of The Keyboard

The screen editing keys work in *Rapidwriter* just as if you are editing a BASIC program. Other keys are defined by the program to have special functions. First there are the "f" keys, which vary in meaning depending on which screen is displayed, and there are the various special keys like tab, PULL and PUSH which speed editing operations in *Rapidwriter*.

Below is an annotated tour of the keyboard summarizing the functions of each key. In the listing below, SHIFT means Hold: SHIFT Press: the key listed. COMMODORE means Hold: COMMODORE key Press: the key listed.

22.1 Top Row

left arrow - pulls a character at a time from the next line back to the mid-screen line and erases that character from the next line at the same time. Puts the program into screen read mode.

SHIFT left arrow - line gluing - pulls as many characters from the next line as will fit into the line length specified in the OM, without cutting any words. Moves the filled line up on the screen, and puts the line pulled from into the center of the screen. Puts the program into screen read mode. Will repeat if preceded by f1 or f3. Used to reformat scattered lines into neat paragraphs by repeated passes through the text.

1, 2, 3 etc. to 0 and SHIFT 1, 2, 3 etc. work as on a typewriter.

SHIFT 2 or Quotation Mark " VERY IMPORTANT!

Quotes have special meaning to the computer. When you type a quote, the program puts double quote marks on the screen, the extra pair of which are removed when the text is printed out. If an odd number of quote marks are left on the line for any reason when the line feed takes place, then the line will have to be erased. This can only be done by positioning the line in the TYPE LINE# space with the f1 or f3 scrolling keys, and then using f8 to erase it. Persisting in trying to repair the damage will only aggravate the situation.

Erase the line, and retype it.

+ used in arithmetic operations.

SHIFT + when typed into a line, followed by a cursor or other key that puts the program into screen read mode, will then put the program into calculator mode.

- used in arithmetic.

SHIFT - The function of this character varies with its position on a line. When printing, if this character is the first on the line, it will cause a form feed to the top of the next page. The rest of the line will not be printed. If it is elsewhere on a line, it will cause the rest of the line to be printed starting at the left margin of the next line, as if it were a separate line.

COMMODORE - the escape code which precedes direct commands to the printer to change type face etc.

Pound Sign prints as "!", unless the internal switches of the printer are set for "English" mode.

CLR/HOME PUSHes the character to the left of the cursor from an unedited line, or the last character typed from an edited line to the first position of the next line down. The character will be removed from an unedited line, and will still be there for screen read on an edited line.

SHIFT CLR/HOME line gluing. Dumps every character from the current line starting at the cursor and continuing to the end of the line to the start of the next line down. If the cursor is at the first position when the key is pressed, then the whole line is tacked onto the next line with a space inserted between the two glued lines.

INST/DEL deletes the character to the left of the cursor. Goes into screen read mode.

SHIFT INST/DEL opens a space to the left of the cursor. Next character typed goes into that space. Goes into screen read mode. Range of effect is limited to 80 or 88 character lines. See section 15.71

22.2 Second Row

CTRL - not operative in *Rapidwriter*. Can be used to change color of print on screen. Hold CTRL, press a number key 1 through 8, and press RETURN.

Q through ` and SHIFT Q through ` normal typewriter keys.

* normal key for typing, and means "times" or "X" in the calculator mode

SHIFT * when used in the first position of a line, will cause the

line to print double size. This character itself is not printed.

COMMODORE * When this mark is the first one on a line, then the line will be automatically centered on the printed page. The mark itself isn't printed. For double size centered printing, the first two characters on the line must be COMMODORE * SHIFT *

Up Arrow.....The tab key. Steps through the preset tabs in turn, then returns the cursor to the first position, and runs the sequence again. In the calculations, means raised to the power, exponent.

Puts the program in screen read mode.

SHIFT up arrow moves the cursor directly to the start of the line.

RESTORE -not operative when the program is running. If pressed at the same time that RUN/STOP is pressed, the program will abort, and all text will be wiped out.

22.3 Third Row

RUN/STOP stops the program. If this key is pressed, or if the program is stopped for any other reason, typing the words "GOTO 3" on a clear line on the screen, and then pressing RETURN followed by f7 a few times will bring things back up and running. The text that has been entered will still be in the computer's memory as long as the RESTORE key was not pressed.

SHIFT/LOCK works as on a normal typewriter.

A through L normal typewriter keys as are SHIFT A through L. : and ; are normal typewriter punctuation marks.

= normal typewriter key when typing; used to construct equations in the calculator mode.

RETURN to end a line and get a line feed. The line is then clipped at the last character preceeding the cursor. Also, whenever the cursor is solid, then the computer is waiting for the user to enter various kinds of control information. Press RETURN when the information requested is ready for the computer to read.

20.4 Fourth Row

COMMODORE key this key in the lower left of the keyboard has four functions. COMMODORE t yields the graphic used for underlining with VIC-1515 and VIC-1525 printers. screen.

COMMODORE SHIFT will change the screen character mode, and result in very strange looking things on the screen. This other mode can be toggled off by pressing COMMODORE SHIFT again. Some graphics will print on some printers, but in general, *Rapidwriter* doesn't handle graphics.

COMMODORE * means center a line when printed if it is the first character on the line.

COMMODORE - is the printer "escape" code

SHIFT - see all the other characters for the many uses of the SHIFT key.

Z through / are normal typewriter keys, as are SHIFT Z through ?. In the calculator mode, < means less than, > means greater than, the . is the decimal point, and / means division. Numbers over 1000 are NOT to be entered with a , in the calculator mode

CRSR means down one line on the screen or right one space.

SHIFT CRSR means up one screen line and left one space. Any of the four CRSR functions sets on the screen read mode.

22.5 The Function Keys

These keys have different meanings in the LINE# (TE) screen and the OPTIONS MENU (OM).

22.51 In The OPTIONS MENU (OM)

f1 opens the files for reading so that text can read into the computer's memory from tape or disk.

f3 opens the printer file so that text can be printed out.

f5 causes each line that is printed out on paper, tape or disk, or simply specified as included in an output cycle to be erased from the computer's memory after output.

f7 toggles back to the TE Type/Edit screen.

f2 (SHIFT f1/f2) opens the tape and/or disk file so that text can be printed onto the tape and/or disk for storage.

f4 (SHIFT f3/f4) toggles Type W/Overlay.

f6 (SHIFT f5/f6) calls into play the Rearrange Text function.

f8 (SHIFT f7/f8) provides access to the routines for setting the line length for editing, and for setting tab stops.

22.52 In The LINE# (TE) Screen

f1 scroll up to lower line numbers

f3 scroll down to higher line numbers

f5 used to put any number line into the LINE# space. Enter the number of the line desired, and press RETURN. Simply pressing RETURN will bring up line 0, and entering 999, will bring up the end of

the current text block.

f7 toggles to the OPTIONS MENU (OM).

f2 starts a print cycle. Functions depend on what is "ON" in the OM.

f4 (SHIFT f3/f4) starts the read cycle from the tape or disk file opened in the OPTIONS MENU.

f6 (SHIFT f5/f6) duplicates the current line.

f8 (SHIFT f7/f8) erases the current line. If the line is blank, then succeeding lines are pulled up one line to close in the gap.

]

]

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